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Bragg reflection wavelength λ and the phase matching wavelength harmonize with each other, and thus a harmonic can be generated.

18 kw 3/28/07

Please amend the paragraph beginning on page 6, line ~~16~~ to read as follows:

It is also preferable that the nonlinear optical material is a Mg-doped $LiNbO_3$ crystal, where the phase matching wavelength harmonizes with a Bragg reflection wavelength, and the Bragg reflection wavelength λ satisfies a relationship of $\lambda_1 < \lambda < \lambda_2$, and a relationship of $\lambda_1 = 613 + 48 \times n$ (nm) and $\lambda_2 = 1.02 \times \lambda_1$ (nm) (n = 0, 1, 2), or $\lambda_1 =$ 754 [[nm]] + 40 × n (nm) and $\lambda_2 = 1.02 \times \lambda_1$ (nm), (n = 0, 1, 2, 3, 4...). As a result, the Bragg reflection wavelength λ and the phase matching wavelength harmonize with each other, and thus a harmonic can be generated.

Please amend the paragraph beginning on page 20, line 7 to read as follows:

Alternatively, the optical waveguide device 108 can be formed so that the convex 106 of the thin film layer 103 is in contact with the LN substrate 102 side, i.e., with the bonding layer 104. A specific example is illustrated in FIG. 4. FIG. 4 is a diagram showing another configuration example of a coherent light source using an optical waveguide device according to the first embodiment. An optical waveguide device 308 is configured by adhering an offcut Mg-doped $LiNbO_3$ crystal thin film layer 303 on a LN substrate 302 via a bonding layer 304. The thin film layer 303 has a striped convex 306, and a periodically domain-inverted region 305 is formed. The LN substrate 302 and the thin film layer 303 are arranged such that the convex 306 is arranged inside the optical waveguide device 308, facing the LN substrate 302. A coherent light source 300 is made up by the optical waveguide device 308 and a semiconductor laser [[308]] <u>301</u> for emitting light to the optical waveguide device 308. The thus configured optical waveguide device 308 can provide a highly-efficient and high-output DBR grating structure for an optical waveguide similar to the optical waveguide device 108 in FIG. 1,